[0022] In the present embodiment, in the open position, first surface **120**, first rounded side **230**, third surface **145**, second flat side **280**, and fifth surface **175** all face the same general direction (shown in FIG. **1**). In the present embodiment, in the shut position, first surface **120** is facing third surface **145**, fourth surface **150** is facing sixth surface **180** and double-fold portable electronic device **100** forms a hexahedron that is substantially three times the height of each housing **105**, **110**, **115** (shown FIG. **3**).

[0023] Referring to FIG. **4**, double-fold portable electronic device **100** is shown, in a side view, as it transitions between the open position (as shown in FIG. **1**) and shut position (as shown in FIG. **3**). In the present embodiment, second side **135**, third side **155**, fourth side **160**, and fifth side **185** are rounded. Transitioning from the open position (shown in FIG. **1**) to the shut position (shown in FIG. **3**) can be effected by folding housings **105**, **110**, **115** onto each other. First planar housing **105** and second planar housing **110** are folded towards each other in the direction that decreases the radial distance between first surface **120** and third surface **145**. Second planar housing **110** and third planar housing **115** are folded towards each other in the direction that decreases the radial distance between fourth surface **150** and sixth surface **180**.

[0024] Transitioning from the shut position (shown in FIG. **3**) to the open position (shown in FIG. **1**) can be effected by unfolding housings **105**, **110**, **115** away from the housing that they are attached to by joints **200**, **205**. First planar housing **105** and second planar housing **110** are unfolded away from each other in the direction that increases the radial distance between first surface **120** and third surface **145**. Second planar housing **110** and third planar housing **115** are unfolded away from each other in the direction that increases the radial distance between fourth surface **150** and sixth surface **180**. As can be seen from FIG. **4**, the rounding of second side **135**, third side **155**, fourth side **160**, and fifth side **185** reduces the friction between the sides when the folding or unfolding occurs.

[0025] Referring to FIG. **5**, double-fold portable electronic device **100** is shown in an exemplary intermediate position. First surface **120** and third surface **145** form an obtuse angle A. Fourth surface **150** and sixth surface **180** form an acute angle B. In the present embodiment, first surface **120** contains a keyboard **375**, third surface **145** contains a first display screen **380**, and fifth surface **175** contains a second display screen **385** (best seen in FIG. **1**). It is apparent to a person skilled in the art that depending on the function the device, display screens **380**, **385** can be a touch screen.

[0026] Referring to FIG. **6**, double-fold portable electronic device **100** is shown in another exemplary intermediate position. First surface **120** and third surface **145** form an obtuse angle C. Third surface **145** and fifth surface **175** are facing the same direction.

[0027] Referring to FIG. **7**, certain internal components within double-fold portable electronic device **100** are illustrated by way of a block diagram. Double-fold portable electronic device **100** is based on a microcomputer that includes a processor **390** connected to a read-only-memory (ROM) **395** that contains a plurality of applications executable by processor **390** to enable double-fold portable electronic device **100** to provide certain services (e.g. calendar, e-mail, phone, etc.). Processor **390** is also connected to a random access memory (RAM) **400** and a persistent storage device **405**, which is responsible for various non-volatile storage functions of double-fold portable electronic device **100**. Processor **390** receives input from input devices **410** such as keyboard **375** (shown in FIG. **1**), display screens **380**, **385** (if they are touch screens), trackwheel **415** (shown in FIG. **8**), and webcam **419** (shown in FIG. **8**). Processor **390** outputs to output devices **420** such as display screens **380**, **385** (shown in FIG. **1**). Processor **390** is also connected to an internal clock **425** and a radio device **430** which, in turn, is connected to an antenna **435**. Together, the radio device **430** and the antenna **435** are used to communicate over a wireless network. Double-fold portable electronic device **100** is operable to receive and transmit communication signals containing data that is communicated to and from a communication system via the radio device **430** and the antenna **435**.

[0028] Referring to FIGS. **1**, **5**, and **9** exemplary uses for double-fold portable electronic device **100** are shown. In FIGS. **1**, display screens **380**, **385** can behave as an extended display screen (i.e., behave as one large screen) or as two separate display screens. For example, when processor **390** is running an application that requires a large display area, processor **390** can treat display screens **380**, **385** as an extended display screen. One example application of double-fold portable electronic device **100** using display screens **380**, **385** as two separate display screens is to have first display screen **380** display a map and have second display screen **385** display a zoomed in area of the map. Another example application of double-fold portable electronic device **100** using display screens **380**, **385** as two separate display screens is to have first display screen **380** display thumbnails and have second display screen **385** display the file represented by a thumbnail that has been selected from first display screen **380**. The arrangement of the display screens **380**, **385** can automatically control the screens' behaviour. For example, transitioning from the open position (see FIG. **1**) to the intermediate position shown in FIG. **5**, can cause processor **390** to change the treatment of display screens **380**, **385** from an extended display screen to two separate display screens or duplicate display screens (i.e., anything shown on one screen is correspondingly shown on the other screen). Likewise, transitioning from the intermediate position shown in FIG. **5** to the open position (see FIG. **1**), can cause processor **390** to change the treatment of display screens **380**, **385** from two separate display screens or duplicate display screens to an extended display screen. In FIG. **9**, second display screen **385** behaves as a touchscreen keyboard **440**. This can be used to play games or service any activity that requires input from more than one user. Touchscreen keyboard **440** may also be used as a touch phone keypad.

[0029] Referring to FIG. **8**, a double-fold portable electronic device in accordance with another embodiment is indicated generally at **100***a*. Double-fold portable electronic device **100***a* is substantially the same as double-fold portable electronic device **100** and like elements of double-fold portable electronic device **100***a* bear the same reference characters, but followed by the suffix "a". However, unlike double-fold portable electronic device **100**, double-fold portable electronic device **100***a* is shown in FIG. **8** displaying a trackwheel **415**, a first button **416** and a second button **417** on either side of trackwheel **415**, all three components embedded in first rounded side **230***a*, and a webcam **419** embedded in the side of second rounded side **275***a*. It is apparent to a person skilled in the art that trackwheel **415** can be other similar input devices such as a trackball, an optical jog ball, and a joy stick.

[0030] Referring to FIG. **9**, a double-fold portable electronic device in accordance with yet another embodiment is indicated generally at **100***b*. Double-fold portable electronic device **100***b* is substantially the same as doublefold portable electronic device **100** and like elements of double-fold portable electronic device **100***a* bear the same reference characters, but followed by the suffix "b". However, unlike double-fold portable electronic device **100**, double-fold portable